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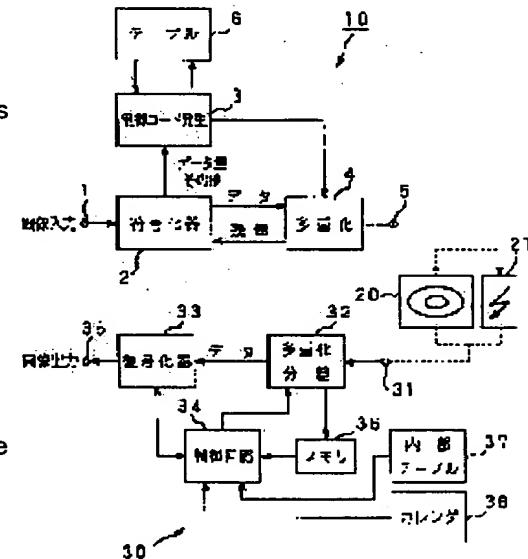
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(54) PICTURE DISPLAY SYSTEM

(57)Abstract:

PROBLEM TO BE SOLVED: To enable multiplex data to be displayed only by a decoding reproducing system sold and installed only in a specific area, where a recording medium for the multiplex data has been sold or where the multiplex data has been broadcast.

SOLUTION: Multiplex data containing an area code is recorded in a recording medium 20; this area code is compared with an internal area code in a decoding device 30; and, when the area code of the recording medium 20 contains the internal area code of the decoding device 30, the recording medium 20 is decoded and reproduced. In addition, acceptance period data are written in the multiplex data in accordance with the area code; this acceptance period is compared with the date of a calendar generator 38 in the decoding device 30; and, if the date of the calendar generator 38 is within the acceptance period, the recording medium 20 is decoded and reproduced.



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CLAIMS

[Claim(s)]

[Claim 1] The image-display system characterized by to have a comparison means compare with the local code of the above 1st and the local code of the above 2nd the decode means which carries out the decode of the coded data which contains the 1st local code at least from multiplexing data, and an occurrence means generate the 2nd local code, and the control means which carries out decode regeneration of the above-mentioned coded data when the local code of the above 1st contains the local code of the above 2nd.

[Claim 2] The above-mentioned local code is an image display system according to claim 1 characterized by being a code showing a country.

[Claim 3] The decode means which carries out the decode of the coded data which contains the data of the 1st local code and a consent term at least from multiplexing data, An occurrence means to generate the 2nd area code, and an instrumentation means to measure an absolute time, The 1st comparison means which compares the local code of the above 1st with the local code of the above 2nd, The image display system characterized by having the 2nd comparison means which compares the above-mentioned consent term with the above-mentioned absolute time, and the control means which carries out decode regeneration of the above-mentioned coded data when the above-mentioned absolute time has the local code of the above 1st in the above-mentioned consent term, including the local code of the above 2nd.

[Claim 4] The data of the above-mentioned consent term are an image display system according to claim 3 characterized by consisting of data of consent start, and data of a consent end.

[Claim 5] The above-mentioned multiplexing data are an image display system according to claim 1 further characterized by carrying out decode regeneration of the above-mentioned control means using the concerned program data including program data.

[Claim 6] The above-mentioned multiplexing data are an image display system according to claim 2 further characterized by carrying out decode regeneration of the above-mentioned control means using the concerned program data including program data.

[Claim 7] The above-mentioned multiplexing data are an image display system according to claim 3 further characterized by carrying out decode regeneration of the above-mentioned control means using the concerned program data including program data.

[Claim 8] The above-mentioned multiplexing data are an image display system according to claim 4 further characterized by carrying out decode regeneration of the above-mentioned control means using the concerned program data including program data.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[The technical field to which invention belongs] this invention encodes a dynamic-image signal, it records on record media, such as videotape and a videodisk, or it transmits it by broadcast, and relates to the image display system which carries out decode regeneration of these.

[0002]

[Description of the Prior Art] Drawing 5 shows the example of 1 configuration of the coding decryption system which has the coding equipment 110 which encodes the signal of a general dynamic image as a configuration of the important section of the conventional image display system, and the decryption equipment 130 which decrypts the coded data encoded by this coding equipment 110.

[0003] The signal of a continuous picture image (dynamic image of time series) is supplied to the input terminal 101 of the coding equipment 110 as a picture image input signal. It encodes with the coding vessel 102 first, and this picture image input signal is sent to the multiplexing machine 104 as coded data.

[0004] here -- the above-mentioned coding machine 102 -- setting -- inter-frame -- by taking the difference or performing DCT (discrete cosine transform) processing etc., the redundant fraction of the orientation of time or the orientation of space is cut down from a original dynamic image (picture image input signal), and the signal is encoded

[0005] With the concerned coding vessel 102, coding based on the so-called MPEG (Moving Picture Experts Group) specification etc. as an example of coding shall be performed. Therefore, one unit (unit data) of the data (coded data) outputted one by one from this coding machine 102 is equivalent to GOP (Group Of Picture) which is the coding dynamic image of one group in the thing which encoded the signal (signal of one frame or one field) of the subject-copy image of one sheet by MPEG specification, or MPEG specification. In addition, it is determined by the capacity of buffer memory and the amount of data of coded data which are prepared in the multiplexing machine 104 which mentions later what each unit data is carried out and not to illustrate.

[0006] Moreover, from the above-mentioned coding machine 102, the information and the informations on other which show the amount of data of the above-mentioned coded data which carries out an output are also outputted, and these informations are sent to the control-code generator 103.

[0007] Based on the information from the above-mentioned coding machine 102, the concerned control-code generator 103 generates the various control codes relevant to the coded data, and is made as [send / to the multiplexing machine 104]. In addition, a control code is an information on various HDRs, a time stamp, etc., when the coding machine 102 is specifically based on the above-mentioned MPEG specification.

[0008] The above-mentioned multiplexing machine 104 multiplexes the coded data from the above-mentioned coding machine 102, and the various control codes from the above-mentioned control-code generator 103, and outputs the multiplexing data. The concerned multiplexing machine 104 is also made to maintain the continuity of the data to output here. That is, with the coding vessel 102 of the preceding paragraph, as mentioned above, it is made to cut down the redundant fraction of the orientation of time, or the orientation of space from the picture image input signal, therefore the fraction with the high redundancy of a picture image input signal is compressed, the fraction with a conversely

low redundancy is seldom compressed, and the continuity is not guaranteed about the coded data which was outputted from the concerned coding machine 102 for this reason. Then, with the concerned multiplexing vessel 104, the coded data outputted from the above-mentioned coding machine 102 is once stored in the above-mentioned buffer memory, and it is made to output as data which continue at the time of read-out. Moreover, this multiplexing machine 104 is made also as [supply / the information on the residue (storage capacity of all storage capacity-coded data) of the above-mentioned buffer memory / to the coding machine 102], and the coding machine 102 is made as / set / the parameters (for example, quantization step when quantizing the data of a subject-copy image etc.) which determine the amount of data of coded data / based on the above-mentioned residue information from the concerned multiplexing machine 104]. By doing in this way, the multiplexing machine 104 is made as [carry out / an underflow / overflow and].

[0009] It is outputted from the output terminal 105 of the concerned coding equipment 110, after recording on a record medium 120, it is reproduced, or the multiplexing data containing the coded data at which the above-mentioned continuity outputted from the above-mentioned multiplexing machine 104 was maintained are transmitted through a transmission line 121, and are inputted into the input terminal 131 of the decryption equipment 130.

[0010] With the decryption equipment 130, the multiplexing data inputted into the above-mentioned input terminal 131 are sent to the multiplexing eliminator 132. This multiplexing eliminator 132 separates the above-mentioned coded data and various control codes from the above-mentioned multiplexing data, and it sends about coded data and sends to the decryption machine 133 about various control codes at a control circuit 134.

[0011] A control circuit 134 controls the decryption machine 133 based on the control code by which supply was carried out [above-mentioned], and the decryption machine 133 decrypts the above-mentioned coded data based on a control of the above-mentioned control circuit 134, and generates a decode picture signal (signal equivalent to the original picture image). Here, the time by which coded data is supplied to the decryption machine 133, and the time to which the decode of the coded data is carried out with the concerned decryption vessel 133 are not in agreement. Then, in order to adjust such timing (time), in the above-mentioned multiplexing eliminator 132, coded data is once stored in the buffer memory not to illustrate, the stored concerned coded data is read according to the status of a decryption with the decryption vessel 133, and it is made to supply the decryption machine 133.

[0012] The decode picture signal acquired by the decryption with the above-mentioned decryption vessel 133 is outputted from the output terminal 135 of the concerned decryption equipment 130.

[0013] The decode picture signal outputted from the concerned decryption equipment 130 will be sent and displayed on after that, for example, display.

[0014]

[Problem(s) to be Solved by the Invention] According to the conventional image display system constituted as mentioned above, it is possible to carry out decode regeneration of the record medium 120 with which video signals, such as a movie purchased abroad, for example, were recorded with the decryption equipment 130 which brings home to Japan and was sold in Japan. Of course, it is the same when reverse.

[0015] From this, if it is a record medium based on the same specification sold all over the world, decode regeneration can be carried out also with the decryption equipment based on the same specification sold in which area.

[0016] By the way, even if it is a record medium based on the same specification, a copyright person has request of wanting to delay sale by some area or to see off sale.

[0017] For example, the record medium with which a certain movie was recorded may be unable to be reproduced for the ground on good public order and customs by the law of Japan. However, disadvantageous valuing of the user of the grade which may purchase the record medium abroad to not knowing (it is rare that the content can be checked abroad), may carry it into Japan at it, and is exposed [that the content currently recorded on the record medium is illegal and] in a customhouse etc. may arise.

[0018] Moreover, if the performance profit in Japan is taken into consideration when saying that it is the middle (in the middle of [road show]) of theater public presentation of a certain movie still being carried out in Japan, there is a demand by the side of the performance person who wants to prevent

carrying into Japan the record medium with which the movie already sold in a strange land was recorded.

[0019] However, it is difficult to restrict legally the move exceeding the area and country of such a record medium sold actually in a strange land.

[0020] If it is made in view of such status and it is based on the same specification, even if it is the record medium sold in which area, while decode regeneration is fundamentally possible for this invention, it will aim at offering the image display system which enables it to make decode regeneration of the record medium impossible in a specific area also in the decryption equipment of which area.

[0021] Furthermore, in a specific area, this invention aims at offering the image display system to which decode regeneration of the record medium is made to be made, after it carries out fixed time limitation of the decode regeneration of a record medium and the fixed term expires.

[0022]

[Means for Solving the Problem] The image display system of this invention solves an above-mentioned technical problem by carrying out decode regeneration of the coded data, when the 2nd local code which generated the coded data which contains the 1st local code at least apart from this 1st local code in case of decode **** is compared and the 1st local code contains the 2nd local code from multiplexing data.

[0023] That is, if the 2nd local code and the 1st local code which were generated independently are compared and the 2nd local code and the 1st local code agree when according to this invention the 1st local code in which a separation or decode is possible as a control code is multiplexed by multiplexing data with the coded data and the coded data of this multiplexing data is decrypted, it will be made to permit decode regeneration of coded data.

[0024] Moreover, the image display system of this invention faces [carrying out decode] the coded data which contains the data of the 1st local code and a consent term at least from multiplexing data. When the 2nd local code generated apart from this 1st local code is compared, and a consent term is compared with an absolute time and an absolute time has the 1st local code in a consent term, including the 2nd local code, an above-mentioned technical problem is solved by carrying out decode regeneration of the coded data.

[0025] Namely, according to this invention, the 1st local code and which [consent term] in which a separation or decode is possible as a control code are multiplexed by multiplexing data with the coded data. When decrypting the coded data of this multiplexing data If an absolute time is compared with a consent term, and the 1st local code agrees [the 2nd local code] and an absolute time is within a consent term while the 2nd local code and the 1st local code which were generated independently are compared, it will be made to permit decode regeneration of coded data.

[0026]

[Embodiments of the Invention] Hereafter, the gestalt of desirable operation of this invention is explained, referring to a drawing.

[0027] Drawing 1 shows the example of 1 configuration of the coding decryption system applied to the image display system of this invention.

[0028] In the coding decryption system of the example of this invention configuration, with original data (coded data), the 1st local code in which a separation or decode is possible as one of control codes and which shows a country, for example is multiplexed by the multiplexing data transmitted to the multiplexing data recorded on the record medium 20, or the transmission line 21, and the 2nd local code which showed the area where the decryption equipment 30 is sold to the decryption equipment 30 is set to them. The decryption equipment 30 from the above-mentioned multiplexing data from the above-mentioned record medium 20 or the transmission line 21 A separation or decode is good in the 1st local code which shows the country in which the above-mentioned separation or decode is possible. Carry out and the 2nd local code (it is called an internal area code below) which showed this decode area code and the above-mentioned selling area is compared. (It is hereafter called a decode area code) If the above-mentioned internal area code is contained in the above-mentioned decode area code, it will be made to perform decode regeneration of the above-mentioned coded data (if an internal area code and a decode area code agree).

[0029] Moreover, it sets to the coding decryption system of the example of this invention configuration. To the multiplexing data transmitted to the multiplexing data recorded on the record medium 20, or the

transmission line 21 The data in which the consent term of the 1st local code which shows a country, for example, and decode in which a separation or decode is possible as one of control codes is shown with original data (coded data) are multiplexed. The information on the local code (the above-mentioned internal area code) of an area and a calender that the decryption equipment 30 is sold is built in the decryption equipment 30. The decryption equipment 30 from the above-mentioned multiplexing data from the above-mentioned record medium 20 or the transmission line 21 The data in which the 1st local code and consent term which shows the country in which the above-mentioned separation or decode is possible are shown are separated or decoded (a decode area code and decode consent term data are obtained). While the 2nd local code (internal area code) which shows the above-mentioned decode area code and the above-mentioned selling area is compared If the consent term data which decoded [which decoded and above-dissociated] with the date which the built-in calender shows are compared, and the above-mentioned internal area code is contained in a decode area code and a calender date is within a consent term, it will be made to perform decode regeneration of the above-mentioned coded data.

[0030] Hereafter, the configuration of drawing 1 is explained.

[0031] The signal of a continuous picture image (dynamic image of time series) is supplied to the input terminal 1 of the coding equipment 10 as a picture image input signal. It encodes with the coding vessel 2 first, and this picture image input signal is sent to the multiplexing machine 4 as coded data.

[0032] here -- the above-mentioned coding machine 2 -- setting -- inter-frame -- by taking the difference or performing DCT (discrete cosine transform) processing etc., the redundant fraction of the orientation of time or the orientation of space is cut down from a original dynamic image (picture image input signal), and the signal is encoded

[0033] With the concerned coding vessel 2, coding based on the so-called MPEG (Moving PictureExperts Group) specification etc. as an example of coding shall be performed. Therefore, one unit (unit data) of the data (coded data) outputted one by one from this coding machine 2 is equivalent to GOP (Group Of Picture) which is the coding dynamic image of one group in the thing which encoded the signal (signal of one frame or one field) of the subject-copy image of one sheet by MPEG specification, or MPEG specification. In addition, it is determined by the capacity of buffer memory and the amount of data of coded data which are prepared in the multiplexing machine 4 which mentions later what each unit data is carried out and not to illustrate.

[0034] Moreover, from the above-mentioned coding machine 2, the information and the informations on other which show the amount of data (the amount of transaction datas) of the above-mentioned coded data which carries out an output are also outputted, and these informations are sent to the control-code generator 3.

[0035] The concerned control-code generator 3 generates the various control codes relevant to the various flags and coded data which are specified by MPEG specification based on the information from the above-mentioned coding machine 2, and reads program data and various table informations from the information store section 6, and supplies the various above-mentioned control codes, etc. program data, and various table informations to the multiplexing machine 4. In addition, a control code is an information on various flags, various HDRs, a time stamp, etc., when the coding machine 2 is specifically based on the above-mentioned MPEG specification. Moreover, generally, the above-mentioned program data are data for performing the program for a regeneration control called playback control, and constitute a part of program which needs the decryption equipment 30 to carry out a decode operation. About the detail of the concerned program data, it mentions later. Furthermore, the consent term data in which the consent term of the 1st local code which shows the country in which the separation which makes a part of above-mentioned control code or decode is possible, and decode is shown are also stored in the above-mentioned information store section 6 with the above-mentioned program data and various table informations, and the above-mentioned control-code generator 3 also reads these areas code and consent term data from the concerned information store section 6, and supplies them to the multiplexing machine 4. Thus, in this example of a configuration, the above-mentioned control code is made as [determine / based on the information from the information store section 6 / that it mentioned above / by the control-code generator 3]. In addition, a copyright person determines these local codes and a consent term.

[0036] With the above-mentioned multiplexing vessel 4, what multiplexed the control code from the coded data and the above-mentioned control-code generator 3 from the above-mentioned coding

machine 2 etc., and multiplexed concerned coded data and its concerned control code is written in the buffer memory of the interior not to illustrate one by one from the position of the control code. The multiplexing data read from this buffer memory are outputted.

[0037] In addition, it is made to keep the continuity of the data to output being the same as that of the drawing 5 which also mentioned the concerned multiplexing machine 4 above. That is, since the continuity is not guaranteed about the coded data outputted from the coding machine 2 of the preceding paragraph as mentioned above, data are once stored in the above-mentioned buffer memory, and it is made to output with the concerned multiplexing vessel 4 as data which continue at the time of read-out. Moreover, this multiplexing machine 4 is made also as [supply / the information on the residue (storage capacity of all storage capacity-coded data) of the above-mentioned buffer memory / to the coding machine 2], and the coding machine 2 is made as / set / the parameters (for example, quantization step when quantizing the data of a subject-copy image etc.) which determine the amount of data of coded data / based on the above-mentioned residue information from the concerned multiplexing machine 4]. Thereby, the multiplexing machine 4 does not have overflow and carrying out an underflow.

[0038] It is outputted from the output terminal 5 of the concerned coding equipment 10, after recording on the predetermined record medium 20, it is reproduced, or the multiplexing data containing the coded data at which the above-mentioned continuity outputted from the above-mentioned multiplexing machine 4 was maintained are transmitted through the predetermined transmission line 21, and are inputted into the input terminal 31 of the decryption equipment 30. When the above-mentioned multiplexing data are recorded on a record medium 20, it is reproduced from the concerned record medium 20 with the regenerative apparatus not to illustrate, and the multiplexing data is inputted into the decryption equipment 30. Moreover, when multiplexing data are transmitted through a transmission line 21, it is received by the receiver not to illustrate and the multiplexing data is inputted into the decryption equipment 30. In addition, as the above-mentioned record medium 20, the record medium of the shape of a disk which can record a picture signal, or the memory card equipped with semiconductor memory can be used, for example like the videodisks (for example, the so-called DVD (Digital Video Disk) etc.) of the so-called video CD (Compact Disk) or others. Moreover, as a transmission line 21, there are a telecommunication cable system, a Hertzian wave broadcast system, etc.

[0039] Here, the above-mentioned multiplexing data consist of the control-code section and data division, as shown in drawing 2 . As for the above-mentioned control-code section at the time of the control-code section being located in the location read ahead of data division, for example, recording multiplexing data on CD (Compact Disk), the so-called TOC (Table of Contents) corresponds. The above-mentioned control-code section consists of program data division (PBC), and a local code section (CC) and other data divisions in detail.

[0040] With the decryption equipment 30 to which the multiplexing data of the above configurations were supplied, the concerned multiplexing data are sent to the multiplexing eliminator 32. This multiplexing eliminator 32 separates the control code containing the above-mentioned coded data, the above-mentioned program data, etc. from the above-mentioned multiplexing data based on the control from a control circuit 34 so that it may mention later, it sends it to the decryption machine 33 about the above-mentioned coded data, and is sent to memory 36 about the control code containing the above-mentioned program data etc. Data, such as a control code which was supplied to this memory 36 and memorized, will be further sent to a control circuit 34.

[0041] The control circuit 34 builds in ROM (read only memory) in which CPU (central-process unit) not to illustrate and the fundamental operation program were written and not to illustrate, and is made as [perform / a complicated operation] by the control circuit 34 of the example of this invention configuration combining the fundamental operation program currently written in the concerned ROM, and the program memorized by the above-mentioned memory 36.

[0042] First, in the concerned control circuit 34, the aforementioned program data are read among the data memorized by the above-mentioned memory 36. The program data memorized by the concerned memory 36 are program data sent from the coding equipment 10, and are program data for defining the conditions which can be decoded [a regeneration control and] in this example of a configuration. A control circuit 34 starts a decode regeneration operation of the concerned decryption equipment 30 according to the program data read from this memory 36.

[0043] Next, the above-mentioned control circuit 34 is based on the program data read from the above-mentioned memory 36. While the aforementioned control code of the data similarly memorized by memory 36 is read and the internal area data in which the selling area of the concerned decryption equipment 30 further stored in the information store section 37 is shown are read from the concerned store section 37. The absolute-time data (for example, date data) from the internal calendar generator 38 are incorporated, and the content, the above-mentioned internal area data, and absolute-time data of the above-mentioned control code are compared. That is, the aforementioned local code (decode area code) and consent term data of the coding equipment 10 are described to have mentioned above at least by the control code read from the above-mentioned memory 36, and the comparison with the decode area code of the above-mentioned coding equipment 10 and the internal area code of the concerned decryption equipment 30 and the comparison with the above-mentioned consent term data and the above-mentioned absolute-time data are performed in the concerned control circuit 34.

[0044] In the above-mentioned comparison, when the above-mentioned absolute time has the decode area code of the coding equipment 10 in a consent term, including the internal area code of the decryption equipment 30, a control circuit 34 performs the control to which coded data is made to output from the above-mentioned multiplexing eliminator 32 to the decryption machine 33, and when other, on the other hand, it performs a control to which coded data is not made to output from the multiplexing eliminator 32 to the decryption machine 33.

[0045] The above-mentioned decryption machine 33 decrypts the coded data supplied from the above-mentioned multiplexing eliminator 32 based on a control of the above-mentioned control circuit 34, and generates a decode picture signal (signal equivalent to the original picture image).

[0046] thus, with the decryption equipment 30 of this example of a configuration The comparison result of the local code of the above-mentioned coding equipment 10 and the internal area code of the decryption equipment 30 which were supplied through the above-mentioned record medium 20 or the transmission line 21. And according to the comparison result of the above-mentioned absolute time and a consent term, it is made to judge the propriety of regeneration (namely, decode regeneration of the coded data in the decryption machine 33) of the coded data reproduced from the above-mentioned record medium 20, or the coded data transmitted from the transmission line 21.

[0047] In addition, if a decryption is made in the above-mentioned decryption machine 33, the amount of data of coded data and the informations on other will be acquired, and these informations will be supplied to a control circuit 34. A control circuit 34 controls the address of the buffer memory of the multiplexing eliminator 32 based on these informations. Namely, since the time by which coded data is supplied to the decryption machine 33, and the time to which the decode of the coded data is carried out with the concerned decryption vessel 33 are not in agreement for example In order to adjust such timing (time), coded data is once stored in the buffer memory which is not illustrated in the above-mentioned multiplexing eliminator 32. In the control circuit 34, according to the information acquired by the decryption with the above-mentioned decryption vessel 33, the coded data stored in the above-mentioned buffer memory is read, and it is made to supply the decryption machine 33.

[0048] The decode picture signal acquired by the decryption with the above-mentioned decryption vessel 33 is outputted from the output terminal 35 of the concerned decryption equipment 30.

[0049] The decode picture signal outputted from the concerned decryption equipment 30 will be sent and displayed on display, such as flat-panel displays, such as after that (CRT), for example, the Braun tube, and a liquid crystal display, a plasma display, a field emission display.

[0050] Here, with reference to drawing 3 , the example of the control code used in this example of a configuration is explained.

[0051] An example of the local code 40 generated with the aforementioned coding equipment 10 among the control codes which are multiplexed with the aforementioned coded data and transmitted to record or the transmission line 21 at a record medium 20, and the consent term data 50 is shown in drawing 3 .

[0052] The above-mentioned local code 40 shows the name of a country, and is expressing it in the combination of the Roman alphabet of 2 characters in this example of a configuration. In addition, a number, for example like the country code of a telephone is also usable. In the example of drawing 3 , KR is used as a local code which shows the Republic of Korea for GB as a local code which shows Britain for FR as a local code which shows France for DE as a local code which shows Germany for US as a local code which shows the U.S. for JP again as a local code which shows Japan.

[0053] In this example of a configuration, the above-mentioned local code 40 shows the country by which the copyright person etc. is permitted to record or decode regeneration of the coded data transmitted to the transmission line 21 to the record medium 20. Therefore, in the example of drawing 3, decode regeneration is attained only by the six above-mentioned nations. In addition, when decode regeneration in all areas or countries is accepted, as the above-mentioned local code 40, it is describing special symbols, such as **, and discriminates.

[0054] Moreover, the consent term data 50 of drawing 3 consist of consent term start data 50A and consent term end data 50B, and the above-mentioned consent term start data 50A and consent term end data 50B are prepared for every every place region in the example of drawing 3. In drawing 3, in the case of Japan by which the local code 40 is shown by JP, consent term end data 50B is made for consent term start data 50A of the consent term data 50 with 19981231 by 19960201, a consent term is started from February 1, 1996, and this shows that a consent term expires on December 31, 1998. Therefore, decode regeneration of the coded data which was transmitted to regeneration or the transmission line 21 from the record medium 20 from the start stage of the concerned consent term except the end stage in the case of Japan cannot carry out decode regeneration with the decryption equipment purchased though what did not accept, purchased the concerned record medium 20 in the area besides a metaphor, or transmitted from other areas was received, the area, i.e., Japan. Moreover, in the case of the U.S. by which the local code 40 is shown by US, as for this, February 1, 1996 to a consent term is started by consent term end data 50B not having description, although consent term start data 50A is described to be 19960201, and it is shown that it is a consent term after [all] it. In the case of France where the local code 40 is similarly shown by Germany shown by DE, and FR, as for these, January 1, 1997 to a consent term is started by consent term end data 50B not having description, although consent term start data 50A is described to be 19970101, and it is shown that it is a consent term after [all] it. Therefore, decode regeneration of the coded data by which it was transmitted to regeneration or the transmission line 21 from the record medium 20 before the start stage of the concerned consent term in the case of the ** U.S., Germany, and France cannot carry out decode regeneration with the decryption equipment purchased in those areas though what did not accept, purchased the concerned record medium 20 in the area besides a metaphor, or transmitted from other areas was received. Furthermore, when what in the case of Britain by which the local code 40 is shown by GB what ** of consent term start data 50A and consent term end data 50B did not have description, either, and this purchased the record medium 20, or has been transmitted from other areas is received, the decryption equipment always purchased, concerned area, i.e., Britain, shows that decode regeneration can be carried out. Furthermore, in the case of the Republic of Korea where the local code 40 is shown by KR, there is no description of consent term start data 50A, consent term end data 50B is described to be 19991231, and it is shown that this is permitted till December 31, 1999. Therefore, although the decode regeneration of the coded data by which it was transmitted to regeneration or the transmission line 21 from the record medium 20 before the end stage of the concerned consent term in the case of the Republic of Korea can be carried out, with the decryption equipment purchased in the concerned Republic of Korea though what could not carry out decode regeneration, purchased the concerned record medium 20 in the area besides a metaphor, or transmitted from other areas was received, decode regeneration cannot be carried out after the end stage of a consent term.

[0055] In addition, although specification of the date of the above consent terms is unnecessary, in order to prevent resale about the record medium used, for example for a rental, such a date needs to be specified of the record medium 20 usually sold by the root. That is, the rental store had set the loan term among copyright persons, and conventionally, since the record medium which this term ended was resold as a used article, the record medium and distinction which were purchased individually did not stick, but the price of a used article commercial scene had tumbled. On the other hand, if it carries out like the example of this invention configuration, after a consent term expires, the decode regeneration of the record medium used for the rental as mentioned above will become impossible, and the value of it will be lost. Therefore, a transaction of an inaccurate used article can be prevented.

[0056] Next, in the control circuit 33 of the decryption equipment 30 of aforementioned view 1, it explains the flowing of processing which judges the propriety of regeneration decode based on a control code like the above-mentioned view 3 using the flow chart of drawing 4. In addition, according to the program data mentioned above, a control circuit 33 performs the flow chart of this drawing 4.

Therefore, if program data are changed, it is also possible to change the concerned flow chart. Moreover, the example of drawing 4 shows flowing at the time of using a record medium 20.

[0057] In this drawing 4, the local code (this example of a configuration local code of the aforementioned coding equipment 10) currently recorded on the disk as an example of a record medium 20 and consent term data are separated from the multiplexing data reproduced from the disk at step S101. In addition, when the local code etc. is encoded, the concerned local code encoded is decrypted. The following step S102 compares the local code (this example of a configuration internal area code of decryption equipment) stored in the information store section 37 inside the decryption equipment 30, and the local code (this example of a configuration the aforementioned decode area code) from the above-mentioned disk. In this step S102, if it becomes, the disk will judge that it is the disk for which the local code (internal area code of decryption equipment) of the above-mentioned information store section 37 is not contained in the local code on the above-mentioned disk (local code of coding equipment) and with which regeneration does not accept, and will stop regeneration by step S105. On the other hand, if the internal area code of decryption equipment is contained in the local code (local code of coding equipment) currently recorded on the disk in step S102, it will judge that the disk is a disk with which regeneration accepts, and regeneration propriety of the following step S103 will be judged. This step S103 compares, the absolute time, i.e., the date, from the internal calender generator 38 of the consent term data on a disk, and the decryption equipment 30. In the concerned step S103, if the date from the internal calender generator 38 is not contained in the term which the consent term data on a disk show, the disk judges that it is the disk with which regeneration does not accept, and stops regeneration by step S105. On the other hand, if it is within the term which the consent term data on a disk show [the date from internal calender 38 generator] in step S103, it will judge that the disk is a disk with which regeneration accepts, a control circuit 34 will supply a decode instruction to the decryption machine 33 at step S104, and the decryption machine 33 which received this will perform the regeneration decode of coded data.

[0058] In addition, although the example which included the data of a consent term in the control code is given in the example of drawing 3, of course, it is also possible to use only a local code, and the propriety of regeneration decode is judged only in local code in this case. Moreover, it is also possible for the above-mentioned local code to specify not only a country but a larger area or a narrower area, and to correspond to each coding/decryption equipment each. The thing (for example, the multi-statement of the group of consent term start data and consent term end data is carried out) also for which you may furthermore consider as the term but not only time when the above-mentioned consent term is finer, or a bigger term, and two or more consent terms are set up to one local code is also possible.

[0059] As mentioned above, since, in the image display system (coding decryption system) of the example of this invention configuration, it is made to include a local code and consent term data in the control code in multiplexing data, and in order for the decryption equipment 30 to judge the propriety of regeneration decode based on the concerned local code or consent term data, the area and term which can carry out regeneration decode can be set up. Therefore, a request of the copyright person who wants to delay sale by some area even if it is a record medium based on the same specification, or to see off sale can be satisfied. Moreover, even when the record medium which comes to record a certain movie etc. cannot be reproduced for the ground on a law in a certain country, when carrying the concerned record medium into the country, it is not necessary to expose in a customhouse etc. (that is, since it is unreplicable in the regenerative apparatus manufactured in the country, there is no need for exposure). Furthermore, when saying that it is the middle (in the middle of [road show]) of theater public presentation still being carried out, it can be satisfied of the demand by the side of the performance person who wants to prevent carrying into the country the record medium with which the movie already sold in a strange land was recorded in consideration of the performance profit in the country with the country with a certain movie etc. without a legal limit.

[0060]

[Effect of the Invention] If based on the same specification according to the image display system of this invention Even if it is the record medium sold in which area, while decode regeneration is fundamentally possible, also in the decryption equipment of which area, it sets in a specific area. Decode regeneration of the record medium can be made impossible, in a further specific area, fixed time

limitation of decode regeneration of a record medium is made possible, and when the fixed term expires, decode regeneration of the record medium is enabled. In the area where it follows, for example, regeneration of a certain record medium does not accept, regeneration of the record medium carried in from other areas can be forbidden. Moreover, since there are consent term data, it is enabled to permit the reproducible term of a record medium for every area.

[Translation done.]

*** NOTICES ***

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1. This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.**** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the block circuit diagram showing the example of 1 configuration of the coding decryption system by which the image display system of this invention is applied.

[Drawing 2] It is the example of the multiplexing data by the example of this invention configuration.

[Drawing 3] It is an example of a local code and consent term data used in the example of this invention configuration.

[Drawing 4] It is the flow chart which judges reproductive propriety.

[Drawing 5] It is the block circuit diagram showing the example of 1 configuration of the conventional image display system.

[Description of Notations]

2 Coding Machine, 3 Control-Code Generator, 4 Multiplexing Machine, 6, 37 Information Store Section, 20 Record Medium, 21 Transmission Line, 32 Multiplexing Eliminator, 33 Decryption Machine 34 Control Circuit, 36 Memory, 38 Calender Generator

[Translation done.]